

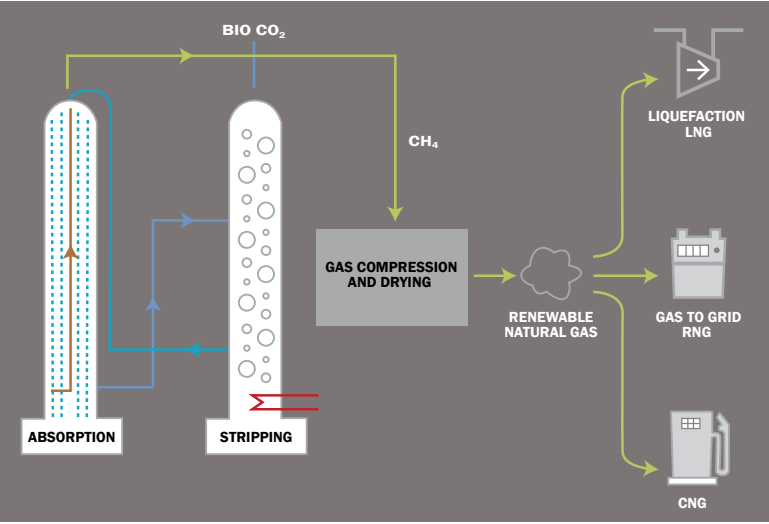


PUREGAS CA AMINE BIOGAS
UPGRADING SYSTEM

Biogas upgrading with the Puregas CA Amine technology offers an unparalleled solution for large volume biogas producers seeking low methane slip and minimal power consumption.

This unique amine upgrading technology efficiently removes CO₂ from biogas, with or without H₂S pretreatment, while providing high quality methane output, lower operational costs, and reduced overall environmental footprint.

With 99.9% CH₄ recovery, our system provides superior economic returns, positioning you to benefit from the highest revenue generation possible in biogas upgrading.



Puregas CA Amine Process Flow

HIGHEST METHANE RECOVERY IN
NORTH AMERICA

With a methane recovery rate of over 99.9%, the Puregas CA Amine technology is the highest-performing biogas upgrading system available in the North American market—maximizing revenue and reducing harmful methane emissions to nearly zero.



PROVEN BIOGAS
TECHNOLOGY

Amine has been used for over 60 years by the oil and gas industry for processing and sweetening natural gas. More recently, this technology has been adopted by the biogas industry for smaller scale use in biogas upgrading.

The Puregas CA Amine technology has been thoroughly tested and refined within the biogas industry for over 20 years. There are currently more than 40 CA system installations globally.

HIGHER REVENUES WITH
LOWER OPEX

The Puregas CA Amine system operates at low pressure, significantly reducing energy requirements compared to other upgrading technologies, as only the product gas (CH₄) is compressed to injection pressures.

Returning up to 90% of the heat required via heat integration with the anaerobic digesters, paired with minimal operating and maintenance costs, make it ideal for producing maximum revenue.

ENVIRONMENTAL
BENEFITS

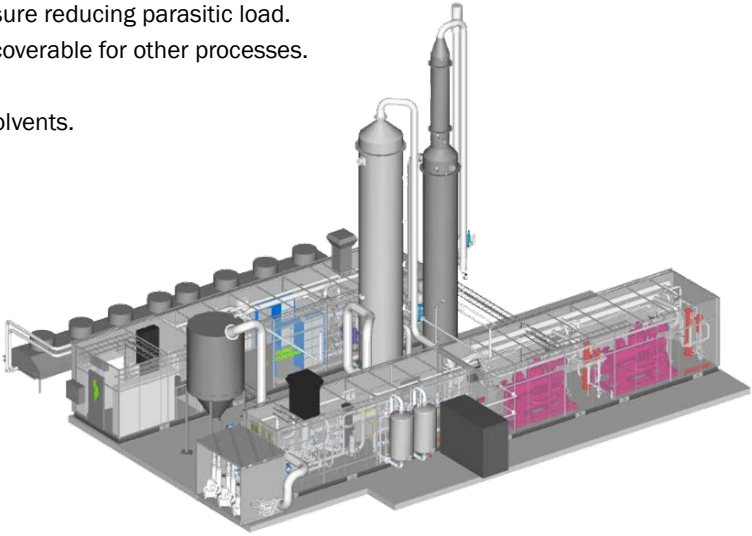
Amine is a biodegradable organic solvent with the formula (CH₃)₂NH that flows through a closed-loop system where the amine is continuously recycled back into the process. No amine is consumed in the upgrading process. This technology reduces methane slip to less than 0.1%, cutting methane emissions by up to 500% compared to other technologies.

KEY BENEFITS
RECAP

- Maximized CH₄ Recovery: 99.9% of CH₄ is recovered.
- Low Power Consumption: Only CH₄ is compressed to high pressure reducing parasitic load.
- High Heat Recovery: 90% of the heat used in the process is recoverable for other processes.
- Minimal Maintenance: Robust design with minimal downtime.
- Eco-Friendly: Closed-loop system with biodegradable organic solvents.

Core Model	Max Capacity (scfm)*
CA60LP	1,200
CA70LP	1,800
CA80LP	3,500

* At 65% CH₄/95F. The capacity varies with the composition, temperature of the biogas and the quality demand of the RNG.



Unison Solutions, Inc. is a U.S.-based manufacturing company specializing in the design and production of biogas conditioning and upgrading systems. Unison offers two biogas upgrading technologies, BioCNG membrane upgrading technology and Amine upgrading technology. All systems are manufactured, assembled, and factory tested at our facility in Dubuque, Iowa. Unison also has a service team to perform equipment start-up, commissioning, and training along with ongoing maintenance. Our expertise in purifying biogas includes hydrogen sulfide removal, siloxane removal, CO₂ removal, compression, moisture removal, and gas quality monitoring. Unison also provides gas analysis and replacement media services for any biogas systems.

Contact our Project Development Team to discuss your specific requirements at sales@unisonsolutions.com.

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